

WHAT IS CLAIMED IS:

- 1 1. An electrosurgical probe for treating a target tissue at a
2 surgical site, comprising:
 - 3 a shaft having a shaft distal end and a shaft proximal end; and
 - 4 an electrode assembly disposed on the shaft, wherein the electrode
 - 5 assembly includes an electrically insulating electrode support and at least one active
 - 6 electrode terminal arranged on the electrode support, each of the at least one active
 - 7 electrode terminal having an electrode lumen therethrough, wherein the electrode
 - 8 lumen is adapted for removing unwanted materials from the surgical site.
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- 1 2. The probe of claim 1, wherein the electrode lumen is in
2 communication with a vacuum source.
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- 1 3. The probe of claim 1, wherein the electrode lumen forms part
2 of an aspiration unit.
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- 1 4. The probe of claim 1, wherein the at least one active electrode
2 terminal includes a working end, and the electrode lumen terminates in an electrode
3 port at the working end.
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- 1 5. The probe of claim 4, wherein the electrode support includes a
2 suction cavity.
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- 1 6. The probe of claim 5, wherein the at least one active electrode
2 terminal includes a suction opening, the suction opening in communication with the
3 suction cavity of the electrode support.
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- 1 7. The probe of claim 6, wherein the suction opening comprises
2 a slit.
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- 1 8. The probe of claim 7, wherein the at least one active electrode
2 terminal comprises a body having a wall, and the slit is arranged longitudinally in
3 the wall.

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1 9. The probe of claim 7, wherein the slit is continuous with the.
2 electrode port.

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1 10. The probe of claim 7, wherein the suction opening further
2 comprises a window.

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1 11. The probe of claim 6, wherein the suction opening extends
2 from the working end of the at least one active electrode terminal to the suction
3 cavity of the electrode support.

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1 12. The probe of claim 6, wherein the suction opening causes
2 preferential flow of an aspiration stream at a first region of the working end.

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1 13. The probe of claim 12, wherein the suction opening defines
2 the first region and a second region, wherein the first region is characterized by a
3 higher flow rate of the aspiration stream than the second region.

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1 14. The probe of claim 13, wherein the first region lies at or
2 adjacent to the suction opening, and the second region lies substantially opposite the
3 suction opening.

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1 15. The probe of claim 13, wherein the second region is a
2 shielded region which promotes the generation and maintenance of a plasma at the
3 working end of the at least one active electrode terminal.

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1 16. The probe of claim 13, wherein the preferential flow of the
2 aspiration stream in the first region promotes the generation and maintenance of a
3 plasma at the second region.

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1 17. The probe of claim 4, further comprising an aspiration unit
2 including an aspiration lumen.

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1 18. The probe of claim 17, wherein the aspiration lumen lies
2 within the shaft.

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1 19. The probe of claim 17, wherein the aspiration lumen is
2 coupled at its proximal end to an aspiration tube.

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1 20. A method of treating a target tissue at a surgical site,
2 comprising:

3 a) providing an electrosurgical probe having an active electrode
4 assembly and a return electrode, the active electrode assembly comprising at least
5 one active electrode terminal, the at least one active electrode terminal including a
6 body, the body having a wall defining an electrode lumen, and the wall having a
7 suction opening therein;

8 b) positioning the active electrode assembly in at least close proximity
9 to the target tissue; and

10 c) applying a high frequency voltage between the at least one active
11 electrode terminal and the return electrode, wherein at least a portion of the target
12 tissue is ablated or modified.